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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference P/62314/GPTU18	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 02/05920	International filing date (day/month/year) 24.12.2002	Priority date (day/month/year) 04.01.2002
International Patent Classification (IPC) or both national classification and IPC H04B10/18		
Applicant MARCONI UK INTELLECTUAL PROPERTY LTD et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - ☒ Basis of the opinion
 - ☐ Priority
 - ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Lack of unity of invention
 - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Certain documents cited
 - ☐ Certain defects in the international application
 - ☐ Certain observations on the international application

Date of submission of the demand 31.07.2003	Date of completion of this report 02.08.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Shaalan, M Telephone No. +49 89 2399-7723 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 02/05920

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-8 as originally filed

Claims, Numbers

1-14 as originally filed

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	7,14
	No: Claims	1-6,8-13
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: WO-A-0050944

D2: EP-A-0684709

Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
PCT/CA02/01461	03. April 2003	27.09.2002	27.09.2001

2. Document D1, see in particular the passages cited in the search report, discloses as in claim 1 (the references in parenthesis apply to the figures of D1):
a method of performing dispersion compensation (figure 10b: item 1001) on an optical communications signal (1012), comprising coarsely dispersion compensating (1020a) the signal as an optical multiplex on a communications network, dropping the signal from the network (figure 14B: item 1440), and applying an adjustable dispersion compensation (1410, 1412) to the dropped signal based on a dispersion information (claim 12) from which the subject-matter of claim 1 differs in that the compensation is based on a measure of the error rate in the signal (figure 18B, and description page).

2.1 The problem to be solved by the present invention may therefore be regarded as which information to select in order to compensate for the dispersion.

2.2 The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

The error rate is described in document D2 (figure 3, item 31) as providing the same advantages as in the present application. The skilled person would therefore regard it as a normal design option to include this feature in the method described in document D1 in order to solve the problem posed.

3. The subject-matter of independent claim 8 corresponds to the subject-matter of claim 1, therefore the above argumentation applies mutatis mutandis.

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4. Dependent claims 2 to 6 and 9-13 do not contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step (Article 33(3) PCT) since these claims merely define an association of known features functioning in their normal way and, in combination, not producing any non-obvious working interrelationship, cf. Guidelines PCT Guidelines Chapter IV, 8.8(B1).
5. The subject-matter of claim 7 and 14 goes beyond that of claim 1 in that the signal multiplex dropped from the network is split into a plurality of separate signal channels, each of which is compensated based on the bit-error rate in the channel.

The problem to be solved by the present invention may therefore be regarded as how to modify the method of dispersion compensation known from D1 in order to improve a signal multiplex.

The solution to this problem proposed in claims 7 and 13 of the present application is considered as not involving an inventive step (Article 33(3) PCT) for the following reasons:

D1 pp. 40-41 and figure 14B hint at demultiplexing the WDM signal into separate channels for compensation purposes.

Certain defects in the international application

1. Reference signs in parentheses should systematically be inserted in all the claims to increase their intelligibility, (Rule 6.2(b) PCT).
2. To meet the requirements of Rule 5.1(a)(ii) PCT, the documents D1 and D2 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.
3. If an amended set of claims is filed, then the description has to be adapted accordingly. The applicant is further requested to provide clear indication from where in the original application the amendments were derived, cf. Article 19(2) PCT.